

Remarks

Applicant maintains that the '222 reference is directed to reticle-history tracking whereas the claimed invention is directed to an automated method of determining the useful life of a wafer processing mask, which may also be stated as forecasting the remaining useful life of a wafer processing mask. Each of the pending claims is believed to be patentable over the cited art for the reasons discussed below.

The Office Action dated February 9, 2006, indicated that claim 14 is objected to; claim 21 is rejected under 35 U.S.C. § 112(1); claim 16 is rejected under 35 U.S.C. § 112(2); claims 14, 16, 17 and 19-23 are rejected under 35 U.S.C. § 102(e) over Wiesler *et al.* (U.S. Publication No. US2001/0047222); claim 15 is rejected under 35 U.S.C. § 103(a) over Wiesler *et al.* in view of Terao (U.S. Patent No. 5,191,535); claim 18 is rejected under 35 U.S.C. § 103(a) over Wiesler *et al.* in view of Wang *et al.* (U.S. Patent No. 5,859,964); and claim 24 is rejected under 35 U.S.C. § 103(a) over Wiesler *et al.* in view of DeWitt (U.S. Patent No. 5,214,486).

With respect to the objection to claim 14, Applicant notes that the failure to provide explicit antecedent basis for terms will not necessarily render a claim indefinite. *See, e.g.,* MPEP § 2173.05(e). The MPEP explains that a claim is not indefinite if the scope of a claim would be reasonably ascertainable by those skilled in the art and that inherent components of elements recited have antecedent basis in the recitation of the components themselves. The term “useful life” is readily understood with respect to masks used in wafer processing as evidenced by its use in numerous patent documents including the cited '222 reference. While Applicant appreciates the Examiner's suggestion to amend claim 14, consistent with the above discussion, an amendment is not believed to be necessary. Applicant accordingly requests that the objection be removed.

With respect to the Section 112(1) rejection of claim 21, Applicant has amended claim 21 to remove the word “continuously.” The Office Action acknowledges that the instant Specification teaches updating the determined useful life of each mask “as the mask moves throughout the wafer processing facility.” Thus, Applicant submits that the claim is enabled by the corresponding written description and requests that the rejection be withdrawn.

With respect to the Section 112(2) rejection of claim 16, Applicant has amended claim 16 by changing “the” to “a” to provide proper antecedent basis for the “new location identification code.” Therefore, Applicant submits that the rejection has been overcome and requests that it be withdrawn.

Applicant respectfully traverses the prior art rejections (Sections 102(e) and 103(a)) because the Office Action fails to present a reference or combination of references that corresponds to the claimed invention. More specifically, the Office Action fails to identify where the ‘222 reference teaches a comparison of the mask data to a mask baseline specification and analyzing and tracking mask degradation data to determine the useful life of each mask. At page 9, the Office Action erroneously states that “the claims are silent on ‘baseline specification’.” Applicant notes that claim 14 explicitly states “conducting a degradation analysis on each mask that includes a comparison of the mask data to a mask baseline specification so as to generate degradation data for each mask” (emphasis added). The ‘222 reference does not appear to discuss any analysis involving the claimed comparison. Without a presentation of correspondence to each of the claimed limitations, the prior art rejections are improper and cannot be maintained. Applicant accordingly requests that each of the rejections be withdrawn.

Moreover, the ‘222 reference fails to teach the claimed method for determining the useful life of wafer processing masks -- and the Office Action’s citation to paragraph 20 of the ‘222 reference teaches away from determining the useful life of wafer processing masks. The Office Action’s arguments that the ‘222 reference teaches attributes useful for determining the useful life is entirely misplaced. These attributes are used by the ‘222 reference for the purpose of maintaining reticles so that the reticles can continue to be used without any determination or projection as to the actual useful life. Thus, the “times cleaned” attribute recorded in Fig. 3A merely counts the number of times a reticle has been cleaned – which is useful for determining whether the reticle should be serviced. Likewise, the “clean max” attribute recorded in Fig. 3E appears to be a user-entered limit on the number of times a reticle is allowed to be cleaned by the ‘222 management system – also useful for determining whether the reticle should be serviced. There is no teaching in the ‘222 reference that these attributes are used to analyze a

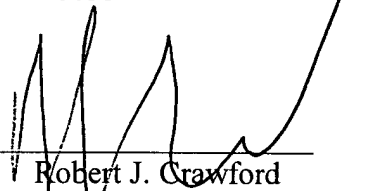
reticle to determine its useful life. Further, the relied-upon paragraph 20 is specifically directed to recording reticle maintenance data and explicitly teaches that "During the lifetime of a reticle, a reticle may be placed on hold." By placing a reticle "on hold," the '222 reference teaches that such a status can be assigned for the servicing-type maintenance discussed above. Without a presentation of correspondence to each of the claimed limitations, each of the prior art rejections are improper. Applicant accordingly requests that each of the rejections be withdrawn.

In view of the above discussion, Applicant believes that each of the rejections has been overcome and the application is in condition for allowance. Favorable reconsideration of this application is requested. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is encouraged to contact the undersigned at (651) 686-6633.

Respectfully submitted,

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